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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,441	07/17/2003	Menachem Levanoni	YOR920000508US2	1090

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EXAMINER
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KARMELEK, ALISON L

ART UNIT	PAPER NUMBER
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3623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/620,441

Applicant(s)

LEVANONI ET AL.

Examiner

Alison Karnelek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213:

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 17072003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The following is a non-final, first office action upon examination of application number 10/620,441. Claims 1-7 and 9-19 are pending and have been examined on the merits discussed below.

#### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-7 and 9-19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5-7, 9, 12, 8, 10-11, and 13-18, respectively, of U.S. Patent No. 6,658,422 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 9, 10 and 15 of the instant application merely recites broader versions of the limitations recited in claims 1, 9, 12 and 14 of US 6,658,422 B1, merely removing certain elements and functions. For example, claim 1 of the US 6,658,422 B1 application recites "wherein the employing the data mining technique comprising employing neural networks as the data mining technique," whereas the instant application does not specify a data mining technique in order to broaden the scope of the limitation. Further, claims 9, 10 and 15 are also broadened as to not limit the data mining technique involved in the claim, as mentioned above in claim 1. Claim 15 further broadens claim 14 of the US 6,658,422 B1, which recites "wherein said regional product allocation resources comprise a compendium of at least one of regional product allocation management solutions, regional product allocation information, and regional product diagnostics," whereas the instant application does not specify what said regional product allocation resources comprise. Therefore, modifying claims 1, 9, 12 and 14 of US 6,658,422 B1 by

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eliminating elements or their functions is respectfully deemed obvious as per In re Karlson.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 and 9-10, 12-13, 14-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renslo et al. (US Patent No. 5,446,890) in view of Ballard et al. ("Data Modeling Techniques for Data Warehousing," 1998).

6. As per claim 1, Renslo teaches a computer and method comprising providing a demand database comprising a compendium of individual demand history, providing a supply database comprising a compendium of at least one of product allocation management solutions, product allocation information, and product allocation diagnostics (Fig. 19, teaches a database that holds all of the necessary product and forecast information as well as order history and forecast result. In other words, the tables of relational database 26 indicates the steps of providing a demand database comprising a compendium of individual demand history, and a supply database

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comprising a compendium of at least one of product allocation management solutions, product allocation information, and product allocation diagnostics);

Employing a data mining technique for interrogating said demand and supply databases for generating an output data stream, said output data stream correlating a demand problem with a supply solution (col. 3, lines 45-63 teach that in order to predict product demand, knowledge base as a data mining technique is used where col. 5, lines 60-61 teach that to feed the expert system with information, data is automatically queried from the database as demand and supply databases which, according to col. 3, lines 59 – col. 4, line 3, includes actually product information, e.g., product number, product option, distribution market, unit volumes-current, unit volumes-historical, net revenue as supply solution, to product results as an output data stream. Further col. 1, line 66- col. 2, line 10 teaches forecasting results is an analysis of future demands for individual products or variously grouped products as a demand problem).

However, Renslo does not specifically teach the demand and supply data being regional therefore creating a regional supply solution. Ballard teaches regional demand and supply data creating a regional supply solution (p. 35 teaches data warehousing for providing an integrated, consistent source of data for use in data analysis and business decision making, where p. 48, Fig. 19 teaches manufacturing and product information, or supply information, including regional information as well as seller and product information, or demand information, including regional information. Further p. 12 teaches data mining as a data analysis technique to detect patterns in data and

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applying modeling techniques to explain the patterns and models that are used for forecasting and predicting.)

Both Renslo and Ballard teach databases, or data warehouses, and data mining techniques being used with that data provided in the databases. Further Renslo teaches forecasting demands for grouped products. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the regional groupings of Ballard in the groupings of Renslo to produce regional demand and regional supply data to be used to correlate a regional demand problem with a regional supply solution in order to more accurately predict the supply and demand for a factories. See Renslo col. 1, lines 19-27 and col. 2, lines 5-10.

7. As per claim 2, Renslo teaches updating the demand database (col. 3, lines 50-52 teaches updating where col. 4, lines 7-28 teach the database holding changes, or updates, of information).

8. As per claim 3, Renslo teaches the updating the demand database comprising using the results of employing the data mining technique (col. 4, lines 7-28 teaches the database holding changes, or updates, of information the updating as well as enabling forecast analysts to use the results of past forecasts).

9. As per claim 4, Renslo teaches updating the supply database (col. 4, lines 7-28 teaches the updating as well as enabling forecast analysts to use the results of past forecasts)

10. As per claim 5, Renslo teaches the updating the supply database comprising using the effect of the employing the data mining technique on the demand database

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(col. 3, lines 62-68 and col. 4, lines 1-5 teach the forecasting results, or the data mining technique on the demand database sent to the planning system, or the supply database, which is used to update it).

11. As per claim 6, Renslo teaches refining an employed data mining technique in cognizance of pattern changes embedded in each database as a consequence of updating the demand database (col. 4 lines 23-37 teach modifying, or refining, the forecasts in response to objective or subjective factors relating future product demand, which comes from the demand database and as taught in claim 2 the demand database is updated).

12. As per claim 7, Renslo teaches refining the employed data mining technique in cognizance of pattern changes embedded in each database as a consequence of updating the supply database (col. 8 lines 40-55 teaches storing test forecasts, or updates, comparing the reference forecast and the test forecast to actual orders to determine accuracy and changing the rules of forecasting based on accuracy, meaning the supply database updates change the rules or the refine the technique).

13. As per claims 9 and 10, they recited a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method of claim 1 and a computer with means for performing the method claim 1. Since Renslo teaches a program, or software, and a system running on a Hewlett-Packard implementation of the UNIX operating system, or a computer (col. 3, lines 30-44), these claims are rejected for the same reasons set forth above in claim 1.



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14. As per claims 12 and 13, they recite limitations substantially similar to that of claims 5 and 6 and are rejected for the same reasons set forth above in claims 5 and 6.

15. As per claim 15, it recites a system with databases and a module for holding and performing the method of claim 1. Since Renslo teaches a database and the method of claim 1 performed on a computer (Fig. 1), claim 15 is rejected for the same reasons set forth above in claim 1.

16. As per claim 16, Renslo teaches the data mining module comprising a data mining technique using a cognizance of pattern changes embedded in said demand database and said supply database (col. 4 lines 23-37 teach modifying, or refining, the forecasts in response to objective or subjective factors relating future product demand, which comes from the demand database and as taught in claim 2 the demand database is updated and col. 8 lines 40-55 teaches storing test forecasts, or updates, comparing the reference forecast and the test forecast to actual orders to determine accuracy and changing the rules of forecasting based on accuracy, meaning the supply database updates change the rules or the refine the technique).

17. As per claim 17, Renslo teaches a data mining modules comprising a data mining correlation algorithm as taught in claims 15 and 16. However, Renslo does not teach an algorithm that analyzes demand features including a specific region in which a particular demand was actualized.

Ballard teaches an algorithm that analyzes demand features including a specific region in which a particular demand was actualized (p. 78 teaches data mining with

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scoping the data, for example by geographical locations, or regions, for the data mining module, where p. 12 teaches analysis, or an algorithm, is performed on the data).

Both Renslo and Ballard teach databases, or data warehouses, and data mining techniques being used with that data provided in the databases. Further Renslo teaches forecasting demands for grouped products. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the regional groupings of Ballard in the groupings of Renslo to produce regional demand and regional supply data to be used to correlate a regional demand problem with a regional supply solution in order to more accurately predict the supply and demand for a factories. See Renslo col. 1, lines 19-27 and col. 2, lines 5-10.

18. As per claim 19, Renslo teaches the supply database cumulatively tracking product allocation management market research (col. 1, line 66 – col. 2, line 10 teaches generating reports and displays of forecast data and metrics, or product allocation management market research, and has the capability to review prior forecasts and the related product data upon which they were base).

19. Claims 11, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renslo et al. and Ballard et al. as applied to claims 1 above, and further in view of Bieganski et al. (US Patent No. 6,413,012).

20. As per claim 11, Renslo and Ballard teach all the claim subject matters as discusses above with respect to claim 1, but does not explicitly teach the step of adding a product to a recommended product allocation if the data mining technique determines there is a match between a classification of a demand feature from the demand database and a classification of a demand feature from the supply database.

Bieganski teaches adding a product to a recommended product allocation if the data mining technique determines there is a match between a classification of a demand feature from the demand database and a classification of a demand feature from the supply database (col. 4, lines 65-76, col. 5, lines 1-4, col. 6, lines 13-17, col. 7, lines 35-40 and col. 10, lines 37-50 teach adding items, or products, to a recommendation list, or a recommended product allocation, where compatibility-modified recommendation sets incorporate knowledge about item compatibility and knowledge about items that are already being recommended to, being purchased by, or previously purchased by a user).

Both Renslo and Bieganski teach using rules to produce an output set based on supply and demand. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Renslo such that a product is added to a recommended product allocation if the data mining technique determine there is a match between a classification of a demand feature from the demand

database and a classification of a demand feature from the supply database in order to provide a system with the ability to recommend items based on the compatibility of a new item with items already on the recommendation list.

21. As per claim 14, it recites limitations substantially similar to those of claim 11 and is rejected for the same reasons set forth above in claim 11.

22. As per claim 18, it recites limitations substantially similar to those of claim 11 and is rejected for the same reasons set forth above in claim 11.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cabena et al. ("Intelligent Miner for Data Applications Guide," 1999) teaches data mining applications, techniques, approaches, along with the application of Intelligent Miner with case studies, customer segmentation, cross-selling opportunity identification, and target marketing and attrition models.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison Karnelek whose telephone number is (571) 272-1808. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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3/26/07

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